

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF A NEW TRAFFIC SIGNAL AT MD 355 AND SUGARLOAF PARKWAY IN FREDERICK COUNTY, MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

I. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA (6) SIX-PHASE FULLY-TRAFFIC-ACTUATED MODE WITH THE MD 355 APPROACHES RUNNING CONCURRENTLY AND THE SUGARLOAF PARKWAY APPROACHES RUNNING CONCURRENTLY. PEDESTRIAN PHASES WILL RUN CONCURRENTLY WITH NORTHBOUND AND SOUTHBOUND MD 355. A PUSHBUTTON ACTUATED PHASE WILL RUN CONCURRENTLY WITH EASTBOUND AND WESTBOUND MOVEMENTS OF SUGARLOAF.

EXCLUSIVE/PERMISSIVE LEFT TURN PHASES WILL BE PROVIDED FOR NORTHBOUND AND SOUTHBOUND MD 355.

CONTROLLER REQUIREMENTS:

A FULLY TRAFFIC ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER IN A BASE-MOUNTED SYSTEM - READY CABINET WITH VIDEO CAMERA DETECTION WILL BE INSTALLED AT THIS INTERSECTION.

SPECIAL NOTE:

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR:

CATEGORY CODE NO.	SPEC. NO.	QUANTITY	DESCRIPTION
-------------------	-----------	----------	-------------

NO EQUIPMENT TO BE SUPPLIED BY SHA; HOWEVER, CABINET AND CONTROLLER TO BE SUBMITTED TO SHA FOR TESTING BEFORE APPROVAL IS GRANTED FOR USE.

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR:

CATEGORY CODE NO.	SPEC. NO.	QUANTITY	DESCRIPTION
-------------------	-----------	----------	-------------

120500	104	L.S.	MAINTENANCE OF TRAFFIC
203030	205	3 C.Y.	TEST PIT
585618	556 SP	22 L.F.	FURNISH AND INSTALL 5 IN. DOUBLE YELLOW HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (CENTERLINE)
585620	556 SP	147 L.F.	THERMOPLASTIC PAVEMENT MARKING (CROSS WALK)
585624	556 SP	53 L.F.	THERMOPLASTIC PAVEMENT MARKING (STOP LINE)
585630	556 SP	8 E.A.	FURNISH AND INSTALL PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (ARROWS)
800000		7 EA.	FURNISH AND INSTALL MICRO LOOP PROBE SET W/ 500 FT. LEAD-IN. (NON-INVASIVE)
816001	816	4 EA.	FURNISH AND INSTALL VIDEO DETECTION CAMERAS.
816010	816	8 EA.	FURNISH AND INSTALL 500 FT. VIDEO DETECTION CABLE.
816015	816	1 EA.	FURNISH AND INSTALL VIDEO DETECTION INTERFACE EQUIPMENT, CAMERAS 1-4
818021	818	1 EA.	FURNISH AND INSTALL 27 FT STEEL MAST ARM POLE W/ 38 FT MAST ARM.
818030	818	1 EA.	FURNISH AND INSTALL 27 FT STEEL MAST ARM POLE W/ 50 FT MAST ARM.
818051	818	1 EA.	FURNISH AND INSTALL 27 FT STEEL MAST ARM POLE W/ 50 FT/70 FT MAST ARMS.
818004	818	3 EA.	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE (ANY SIZE)
801004	801	14 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
801104	812	76 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4"x4"
801106	812	201 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4" X 6".
802501	810	502 L.F.	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
810010	810	40 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 1 WIRE NO. 4 AWG THHN/THWN
811001	811	15 EA.	FURNISH AND INSTALL ELECTRICAL HANDHOLE.
813014	813	172 S.F.	INSTALL GROUND MOUNTED SIGN.
813015	813	163 S.F.	INSTALL OVERHEAD SIGN.
837001	804	5 EA.	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIA. X 10 FT. LENGTH.
838003	807	1 EA.	FURNISH AND INSTALL CONTROL AND DISTRIBUTION (120/240, 1 PHASE 3 WIRE SYSTEM).
860270	814	6 EA.	FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION (BLACK FACED)
860272	814	32 EA.	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION (BLACK FACED)
860278	814	2 EA.	FURNISH AND INSTALL 12 IN. PEDESTRIAN SIGNAL HEAD SECTION (POLE MOUNT)
860282	814	2 EA.	FURNISH AND INSTALL 12 IN. PEDESTRIAN SIGNAL HEAD SECTION (PEDESTAL POLE MOUNT)

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR:

CATEGORY CODE NO.	SPEC. NO.	QUANTITY	DESCRIPTION
585464	549	2 EA.	REMOVE EXISTING PAVEMENT MARKINGS-ARROWS
805160	805	50 L.F.	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
807202	807	1 EA.	FURNISH AND INSTALL METERED SERVICE PEDESTAL
861105	810	477 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861106	810	717 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	810	86 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	810	1816 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
865201	817	4 EA.	FURNISH AND INSTALL PEDESTRIAN PUSH BUTTON AND SIGN
870160	805	105 L.F.	FURNISH AND INSTALL 2 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED
805115	805	20 L.F.	FURNISH AND INSTALL 3 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - BORED
870163	805	1077 L.F.	FURNISH AND INSTALL 3 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED
870166	805	20 L.F.	FURNISH AND INSTALL 4 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED
870167	805	430 L.F.	FURNISH AND INSTALL 4 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - BORED
871202	805	1 EA.	INSTALL CONTROLLER AND CABINET - BASE MOUNTED
900000	900000	1 EA.	FURNISH NEMA 6 BASE MOUNTED CABINET AND CONTROLLER
900000	900000	2 EA.	FURNISH FOUR-CHANNEL, RACK MOUNTED, LOOP DETECTOR AMPLIFIER
900000	900000	335 S.F.	FURNISH SHEET ALUMINUM SIGNS

- 2 EA R3-6L SIGN 30"x36"

- 2 EA R3-5R SIGN 30"x36"

- 1 EA R4-7 SIGN 24"x30"

- 6 EA W3-3 SIGN 48"x48"

- 2 EA W16-8 SIGN 60"x12"

- 4 EA D3-2 SIGN 16"x96"

- 4 EA D3-2 SIGN 16"x72"

- 2 EA R10-12 SIGN 30"x36"

- 1 EA ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD 355, LEFT ARROW" (48"x75")-GROUND MOUNT

- 1 EA ASSOCIATED SHIELD ASSEMBLY "NORTH, MD 355, RIGHT ARROW" (30"x63")-POLE MOUNT

- 1 EA ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD 355, RIGHT ARROW" (30"x51")-GROUND MOUNT

- 1 EA ASSOCIATED SHIELD ASSEMBLY "NORTH, MD 355, LEFT ARROW" (48"x90")-POLE MOUNT

- 4 EA M2-1 SIGN 21"x15"

- 4 EA MI-5 "MARYLAND, 355"(24"x24")

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

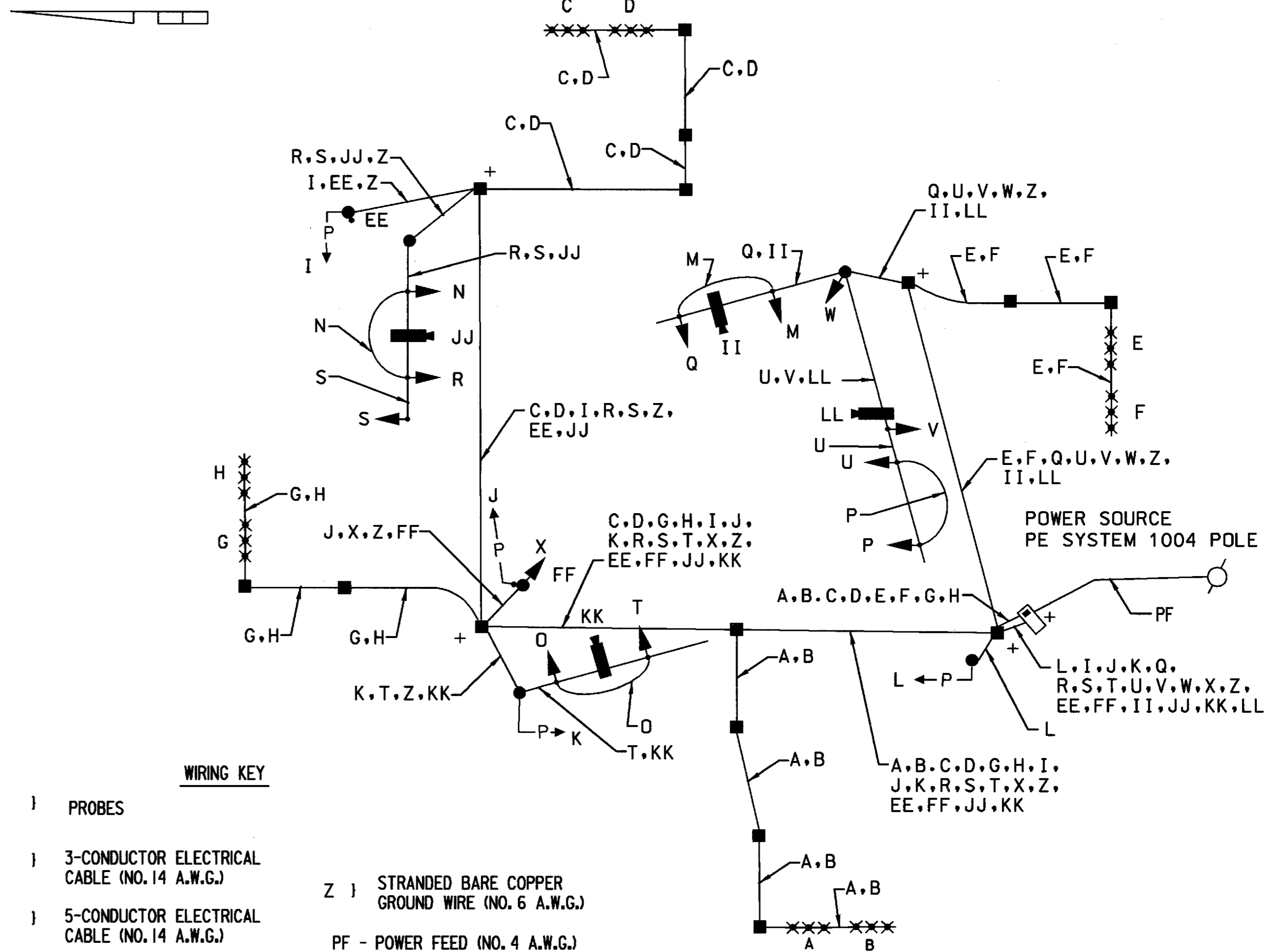
MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8141

MR. ANDREA ABEND
UTILITY ENGINEER
PHONE: (301) 624-8115

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

THE POWER COMPANY REPRESENTATIVE IS:
ALLEGHENY POWER
MR. BRUCE WIBBERLY
PHONE: (301) 694-4485

WIRING DIAGRAM



WIRING KEY

A - H } PROBES

I - L } 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

M - P } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

Q - X } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

AA - DD } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

EE - FF } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

II - LL } VIDEO CABLE FOR CAMERA

Z } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

PF - POWER FEED (NO. 4 A.W.G.)

+ - 3/4 IN. x 10 FT. GROUND ROD

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	14	12	15	16
PHASE 1+5	R/-G	R/-G	R/-G	R	R/-G	R/-G	R/-G	R	R	R	R	R	DW	DW	DW	DW
1+5 CHANGE													DW	DW	DW	DW
PHASE 1+6	G/-G	G/-G	G/-G	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1+6 CHANGE	G/-Y	G/-Y	G/-Y	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2+5	R	R	R	R	G/-G	G/-G	G/-G	G	R	R	R	R	WK	WK	DW	DW
2+5 CHANGE	R	R	R	R	G/-Y	G/-Y	G/-Y	G	R	R	R	R	WK	WK	DW	DW
PHASE 2+6	G	G	G	G	G	G	G	G	R	R	R	R	WK	WK	DW	DW
PHASE PED CLEAR	G	G	G	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW
2+6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 4+8	R	R	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW
4+8 CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4+8 ALT	R	R	R	R	R	R	R	R	G	G	G	G	DW	DW	WK	WK
PHASE PED CLEAR	R	R	R	R	R	R	R	R	G	G	G	G	DW	DW	FL/DW	FL/DW
4+8 CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

TRAFFIC SIGNAL GENERAL INFORMATION
MD 355 EXISTING AT SUGARLOAF PARKWAY

DRAWN BY: SSS	F.A.P. NO. NONE	TS NO. 4362	SHEET NO. 128 OF 152
CHECKED BY: SSW	S.H.A. NO. NONE	T.J.M.S. NO. GI43	
SCALE: 1"=20'	COUNTY: FREDERICK		
DATE: 8/26/04	LOG MILE: 10035503.81		

